GIS REGISTRY INFORMATION

SITE NAME:	FOX VALLEY AND WE	STERN - APPLETO	ON REFUELING		
BRRTS #:	02-45-129856		ppropriate):		7
COMMERCE # (if appropriate):					
CLOSURE DATE:	09/16/2003			-	-
STREET ADDRESS:	WHITMAN AVENUE AN	ND SECOND STRE	ET		-
CITY:	APPLETON				
SOURCE PROPERTY GPS COOF WTM91 projection):	RDINATES (meters in	X=	644914	Y= 421408	<u>-</u> 3
CONTAMINATED MEDIA:	Groundwater		Soil	Both	х
OFF-SOURCE GW CONTAMINAT	TION >ES:	Yes		X No	
IF YES, STREET ADDRESS 1:					
GPS COORDINATES (meters in W	/TM91 projection):	X=	,	Y=	-
OFF-SOURCE SOIL CONTAMINA Specific RCL (SSRCL):	TION >Generic or Site-	Yes		X No	
IF YES, STREET ADDRESS 1:					_
GPS COORDINATES (meters in W	/TM91 projection):	X=		Y=	-
CONTAMINATION IN RIGHT OF V	VAY:	Yes		X No	
DOCUMENTS NEEDED:					
Closure Letter, and any conditional c	closure letter issued				Х
Copy of most recent deed, including	legal description, for all af	fected properties (RAILROAD PROPE	RTY NO DEED REQUIRED)	
Certified survey map or relevant port County Parcel ID number, if used for	tion of the recorded plat ma	ap (if referenced in the	e legal description) fo	r all affected properties	x
Location Map which outlines all properties parcels to be located easily (8.5x14" if paper wells within 1200' of the site.	s within contaminated site bound	aries on USGS topogra	phic map or plat map ir p must also include the	n sufficient detail to permit the location of all municipal and potable	х
Detailed Site Map(s) for all affected p potable wells. (8.5x14", if paper copy) This the source property and in relation to the bou generic or SSRCLs.	map shall also show the location	n of all contaminated pul	blic streets, highway an	d railroad rights-of-way in relation to	x
Tables of Latest Groundwater Analyt	ical Results (no shading or	r cross-hatching)			Х
Tables of Latest Soil Analytical Resu	lts (no shading or cross-ha	atching)			X
Isoconcentration map(s), if required extent of groundwater contamination defined				nap should have flow direction and	x
GW: Table of water level elevations,	with sampling dates, and f	ree product noted i	f present		Х
GW: Latest groundwater flow directi greater than 20 degrees)	on/monitoring well location	n map (should be 2	maps if maximum	variation in flow direction is	Х
SOIL: Latest horizontal extent of co	ntamination exceeding ger	neric or SSRCLs, wi	th one contour		Х
Geologic cross-sections, if required		··			<u> </u>
RP certified statement that legal desc		accurate			X
Copies of off-source notification lette		achie/achie bish	or rollroad BOMA		\vdash
Letter informing ROW owner of resid					
Copy of (soil or land use) deed restri	ction(s) or deed notice if ai	ny requirea as a cor	iaition of closure		ــــــــــــــــــــــــــــــــــــــ



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor Scott Hassett, Secretary Ronald W. Kazmierczak, Regional Director

Oshkosh Service Center 625 East County Road Y, STE 700 Oshkosh, Wisconsin 54901-9731 TELEPHONE 920-424-3050 FAX 920-424-4404

September 16, 2003

Geoffrey Nokes CN Environment 17641 South Ashland Avenue Homewood, IL 60430-1345

SUBJECT:

Final Case Closure With Condition Met for Fox Valley & Western -- Refueling Station, Whitman Ave & Second St, Appleton, Wisconsin WDNR BRRTS # 02-45-129856

Dear Mr. Nokes:

On July 21, 2003, your request for closure of the case described above was reviewed by the Northeast Region Closure Committee. The Closure Committee reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. On July 30, 2003, you were notified that conditional closure was granted to this case.

On September 8, 2003, the Department received correspondence indicating that you have complied with the conditions of closure. Abandonment forms for monitoring wells, MW-1 through MW-7 were received. Based on the correspondence and data provided, it appears that your case has been remediated to Department standards in accordance with s. NR 726.05, Wis. Adm. Code. The Department considers this case closed and no further investigation, remediation or other action is required at this time.

Your site will be listed on the DNR Remediation and Redevelopment GIS Registry of Closed Remediation Sites. Information that was submitted with your closure request application will be included on the registry. To review the sites on the GIS Registry web page, visit http://gomapout.dnr.state.wi.us/org/at/et/geo/gwur/index.htm

Please be aware that the case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment.

If you have any questions regarding this letter, please contact me at (920) 424-7887.

Sincerely,

Jennifer Borski

Hydrogeologist, Bureau for Remediation & Redevelopment

Electronic Copy: Bob Mottl, STS





State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor Scott Hassett, Secretary Ronald W. Kazmierczak, Regional Director

Oshkosh Service Center 625 East County Road Y, STE 700 Oshkosh, Wisconsin 54901-9731 TELEPHONE 920-424-3050 FAX 920-424-4404

July 30, 2003

Geoffrey Nokes CN Environment 17641 South Ashland Avenue Homewood, IL 60430-1345

Subject:

Conditional Case Closure for Fox Valley & Western - Refueling Station,

Whitman Ave & Second St, Appleton, Wisconsin

WDNR BRRTS # 02-45-129856

Dear Mr. Nokes:

On July 21, 2003, your request for closure of the case described above was reviewed by the Northeast Region Closure Committee. The Closure Committee reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases.

After careful review of the closure request, the Closure Committee has determined that the petroleum contamination on the site from the former refueling area appears to have been investigated and remediated to the extent practicable under site conditions. Your case has been remediated to Department standards in accordance with s. NR 726.05, Wis. Adm. Code and will be closed if the following condition is satisfied:

MONITORING WELL ABANDONMENT

The monitoring wells at the site must be properly abandoned in compliance with ch. NR 141, Wis. Adm. Code. Documentation of well abandonment must be submitted to me on Form 3300-5B found at www.dnr.state.wi.us/org/water/dgw/gw/ or provided by the Department of Natural Resources

When the above condition has been satisfied your case will be closed. Your site will be listed on the DNR Remediation and Redevelopment GIS Registry of Closed Remediation Sites. Information that was submitted with your closure request application will be included on the registry. To review the sites on the GIS Registry web page, visit http://gomapout.dnr.state.wi.us/org/at/et/geo/gwur/index.htm

Please be aware that the case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment.

If you have any questions regarding this letter, please contact me at (920) 424-7887.

Sincerely,

Jennifer Tobias Hydrogeologist

Bureau for Remediation & Redevelopment

Electronic Copy: Bob Mottl, STS



A parcel of land located in the Northwest quarter of Section 34, Township 21 North, Range 17 East, City of Appleton, Outagamie County, Wisconsin. Being more particularly described as follows and as identified on sheet 2 of 2:

Commencing at the Northwest corner of said Section 34;

thence S 0°01'37" W along the West line of said Section 34, a distance of 1107.05 feet,

thence S 89°58'23" E, a distance of 109.33 feet to the POINT OF BEGINNING;

thence N 68°51'25" E, a distance of 96.71 feet,

thence S 43°04'17" E, a distance of 28.21 feet,

thence S 18°40'41" E, a distance of 110.50 feet,

thence S 80°08'31" W, a distance of 48.56 feet,

thence N 76°04'30" W, a distance of 85.13 feet,

thence N 10°25'01" W, a distance of 79.55 feet to the POINT OF BEGINNING.

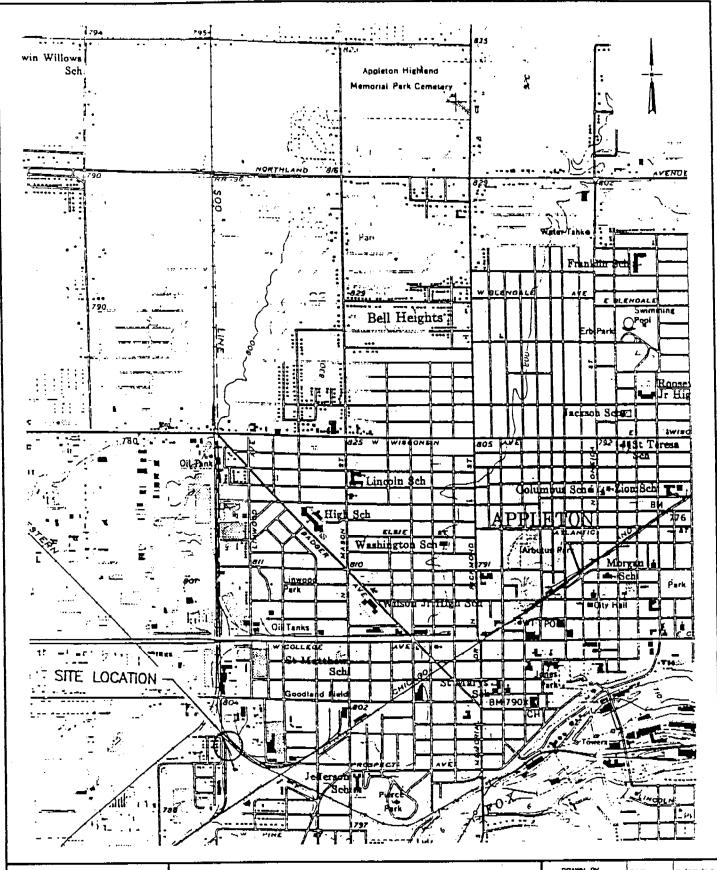
Said parcel contains 13097.35 square feet or 0.30 acres and is subject to all easements and other matters of record.

This instrument drafted by: Francis M. Heafy RLS # 2079

STS Consultants Ltd. Consulting Engineers

WISCONSIN CENTRAL RAILROAD
APPLETON YARD
FORMER REFUELING STATION
GROUNDWATER USE RESTRICTION

DRAWN BY	FMH	9/99
CHECKED BY	RJM	9/99
APPROVED BY	RJM	9/99
\22033sv1b.dgn	SCALE 1"=(
STS PROJECT NO. 22033XF	SHEET NO	





STS Consultants Ltd. Consulting Engineers

PROJECT/CLIENT

APPLETON YARD APPLETON, WISCONSIN SITE LOCATION DIAGRAM

DRAWN BY	RAB	8/23/96
CHECHOCO 84	вс	8/23/96
APPROVED BY	MB	4-30-47
SCALE	FIGURE NO	λ.
1"= 2000"		1
STS DRAWING NO.		
W-\DWC96\220	133\XA\G4	33F001.DWG

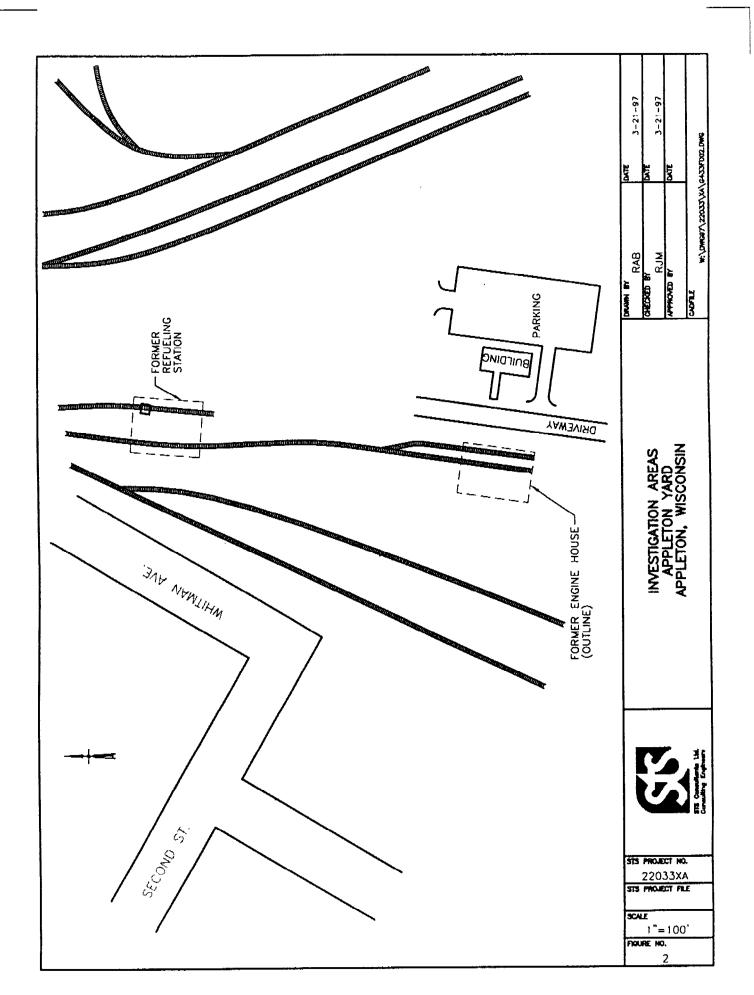


TABLE 2 GROUNDWATER FIELD DATA SUMMARY APPLETON YARD - FORMER REFUELING STATION APPLETON, WISCONSIN

Monitoring	Well Screen	Sand Pack	Date	TPVC	Water Level	Water	Pre Purge	Post Purge	Ferrous	Яd	Conductivity	Temperature	Color	Odor
Well	Elevation	Elevation	Sampled	Elevation*	TPVC	Elevation	DO	DO	Iron			Celcius		
	(feet)	(feet)		(Feet)	(feet)	(feet)	(mg/L)	(mg/L)	(nag/L)					
MW-1	94.4 to 84.4	96.4 to 83.9	11/6/1996	71.66	2.61	96.56	:	ı	;	7.41	1713	13.5	Clear	None
			4/6/1998	99.29	2.24	50.76	;	;	:	;	;	ï	Clear	None
			3/27/2000	99.29	2.70	96.59	1.0	1.0	0.1	6.78	1530	96	Clear	None
			2/18/2002	99.29	2.27	97.02	:	1.0	0.1	;	i	ï	Clear	None
			9/10/2002	99.29	5.14	94.15	;	<1.0	4	:	;	;	Clear	None
			12/9/2002	99.29	4.06	95.23	;	:	;	:	}	;	;	:
												V	5	More
MW-2	93.3 to 83.3	95.3 to 82.8	11/6/1996	98.12	4.24	93.88	;	ł	:	78.0	e e	0.71	d :	STORT
			4/6/1998	71.86	3.21	95.56	:	ï	:	:	:	1 ;	i ea	None
_			3/27/2000	71.86	4.34	94.43	1.0	1.0	0.1	6.76	1300	91	Clear	None
			2/18/2002	72.86	4.29	94.48	:	1.0	0.1	:	;	;	Cless	None
			9/10/2002	11.86	4.63	94.16	1	1.5	0.2	;	;	í	Clear	None
			12/9/2002	71.86	2.88	68.26	;	1		:	;	;	;	1
			, ,	5	ξ	20				7 45	1701	14.5	Clear	None
MW-3	94.9 10 84.9	90.9 to 84.4	0661/0/11	27.73	÷ .	90.00	:			}			Clear	None
			4/0/1998	9.75	1.42	40.54		٠ :	; ;		2150	9	1 200	None
			3/27/2000	92.66	1.58	98.18	<1.0	0.	170	*	0071	0.8	3 6	Mone
			2/18/2002	97.66	2.76	97.00	ı	1.0	0.3	;	:	:	Cear C	None
			9/10/2002	92.66	2.84	96.92	ı	1.0	0.2	:	1	;	Clear	None
			12/9/2002	92.66	4.69	95.07	1	i	;	;	:	:	;	;
											,		i	;
MW-4	94.3 to 84.3	96.3 to 83.8	11/6/1996	80.66	2.77	96.31	;	;	;	7.36	1278	13.4	Clear	Noise
			4/6/1998	99.20	1.60	09.76	1	;	{	:	:	;	Cear	None
			3/27/2000	99.20	1.34	97.86	<1.0	1.0	3.0	6.83	1050	8.6	Clear	Possible
			2/18/2002	99.20	3.03	96.17	;	2.0	0.8	:	:	;	Ckar	Possible
			9/10/2002	99.20	3.07	96.13	;	1.0	5.0	:	1	;	Clear	None
			12/9/2002	99.20	3.06	96.14	ţ	1	!	1	;	ł	ı	í
MW-5	96.1 to 89.1	98.1 to 88.6	12/9/2002	98.58	5.02	93.56	1	2.0	0.2	i	;	ſ	Clear	None
									;				į	Į.
MW.6	96.1 to 89.1	98.1 to 88.6	12/9/2002	98.70	3.83	94.87	;	2.0	Ç.	;	:	;		2000
			3/11/2003	98.70	5.97	92.73	;	:	:	;	ţ	;	Clear	None
		g. 177			;	,							ة ع	None
MW-7	97.3 to 90.3	95.3 to 89.8	12/9/2002	86.56	е. 4	96.54	:	1	1	:	:			

* Elevation referenced to arbitrary elevation of +100.00 *** Elevations were re-established 4/6/98

TPVC = top of PVC esting

y projects?23046tab.Appletor groundwaler lab data NES

GROUNDWATER ANALYTICAL RESULTS APPLETON YARD - FORMER REFUELING AREA APPLETON, WISCONSIN TABLE 3 Page 1

	 			NW-1	7-1					6,000					
	Units	11/6/96	11/26/96	4/8/98	1/27/00	27/18/02	0/10/03	11/6:06	11,06,000					ES	PAL
VOCs				5	204.000	70.001.7	7,10,07	11.0/90	11/20/90	4/8/98	00//7/5	2/18/02	6/10/02	J.Sr	µg′t,
Benzene	J/8rl	<0.19	×	< 0.5	<0.5	×	0: [>	<0.19	×	<0.5	2	>	2	4	
n-Butylbenzene	hg.L	<0.76	×	×	×	×	×	<0.76	: ×	· ×	; ×	: >	?; >	7	3
sec-Butylbenzene	Hg/L	<0.35	×	×	×	×	×	<0.35	×	: ×	: ×	: >	< >	. :	•
MTBE	Hg.L	<0.73	×	< 1.0	<0.92	×	4.0	<0.73	: ×	<10	ć ()	< >	< 4	: 03	: 5
Ethylbenzene	J/gri	<0.19	×	0.1 >	9.0>	×	0.15	<0.19	×	0.1 >	. 00 6	: ×	? *	3 6	2 5
Isopropylbenzene	J'gH	<0.23	×	×	×	×	×	<0.23	: ×	*	; >	< >	? >	3	?
p-Isopropyltoluene	J/8H	<0.52	×	×	×	×	×	<0.52	: ×	: ×	: ×	< ×	< ×	:	;
n-Propylbenzene	Hg:L	<0.36	×	×	×	×	×	<0.36	×	: ×	; ×	: >	< ×	!	
Toluene	hg/L	⊒.	×	< 1.0	<0.6	×	0: ⊽	0.16	: ×	<1.0	; 9°6	< ×	< -	1000	: 00
Total Trimethylbenzenes	#g/L	₹0.81	×	42.0	<2.6	×	2.0	<0.81	×	<2.0	97	: ×	0.0	480	Ž ŏ
Total Xylene	μg/Ľ	<0.57	×	< 2.0	7.1	×	€3.0	<0.57	×	< 2.0		: ×	9 5	86.0	3 2
Naphthalene	J/8rl	<0.54	×	×	×	×	×	<0.54	×	×	×	: ×	;×	40	3
SHEA														:	
Acenaphthene	[/617	*	412		ò	;		:	;	,					
Acepanhthulene	i -	: >	9 4	11.0	< :	< :	7C.U>	×	×	< 0.13	×	×	<0.51	ı	;
A change in a constant of the	ng/L	Κ:	<br !	× 0.08	×	×	0 :I>	×	< 1.3	< 0.08	×	×	<1.0	;	;
Shirthacene	H8.F	×	< 0.12	< 0.03	×	×	<0.052	×	< 0.10	< 0.03	×	×	<0.051	:	,
Benzo(A)Anthracene	T/SH	×	< 0.12	> 0.06	×	×	<0.052	×	< 0.10	> 0.06	×	×	<0.051	;	ı
Benzo(A)Pyrene	ug/L	×	< 0.24	> 0.06	×	×	<0.052	×	< 0.20	< 0.06	×	×	<0.051	0.2	0.02
Benzo(B)r (uoranthene	µ8/L	×	< 0.14	< 0.03	×	×	0.10	×	< 0.12	< 0.03	×	×	0.10	0.2	0.02
Benzo(K.)Fluoranthene	J/grt	×	< 0.26	< 0.03	×	×	<0.052	×	< 0.22	< 0.03	×	×	<0.051	1	;
Benzo(G,H,I)Perylene	7/8ri	×	< 0.26	< 0.05	×	×	<0.10	×	< 0.22	< 0.05	×	×	<0.10	ŀ	;
Chrysene	J/Bri	× .	< 0.10	< 0.04	×	×	<0.052	×	< 0.090	< 0.04	×	×	<0.051	0.2	0.02
Dibenzo (A,H) Anthracene	J/8rf	×	< 0.29	> 0.06	×	×	<0.10	×	< 0.25	< 0.06	×	×	<0.10	;	:
Fluoranthene) 20 1	×	< 0.26	< 0.04	×	×	<0.10	×	< 0.22	< 0.04	×	×	<0.10	400	80
Fluorene	J.Br.	×	< 0.063	< 0.04	×	×	<0.10	×	< 0.055	< 0.04	×	×	0.1 0	460	980
Indeno(1,2,3-CD)Pyrene	T/Bri	×	< 0.13	< 0.04	×	×	<0.052	×	< 0.11	< 0.04	×	×	<0.051	;	i
1-wellymapsinalene	µg/1.	×	T.	> 0.06	×	×	<0.52	×	< 0.92	> 0.06	×	×	<0.51	;	1
2. Methylnaphthalene];8r	×	< 1.0	< 0.07	×	×	<0.52	×	< 0.90	< 0.07	×	×	<0.51	;	;
Naphthalene	T/Brf	×	<0.83	< 0.05	×	×	<0.52	×	<0.71	< 0.05	×	×	<0.51	46	30
Frenanterene	T.Sn	×	< 0.13	< 0.08	×	×	<0.052	×	< 0.11	< 0.08	×	×	<0.051	ï	;
J'yrene	7.8r	×	< 0.44	< 0.17	×	×	<0.052	×	< 0.38	< 0.17	×	×	<0.051	250	50
															
Sulfate	MG/L	490	×	×	<u>-</u>	573	927	360	>	>	,		-	į	,
						,,,,,	7,,,	300	<	· · ·	, , , , , , , , , , , , , , , , , , ,	337	303	250	125

ES = NR 140 Enforcement Standard (March 2008)

PAL = NR 140 Preventive Action Limit (March 2000)

SS.2 NR 140 Enforcement Standard Exceedance

X =Compound was not analyzed MTBE = Methyl-ter-butyl ether

GROUNDWATER ANALYTICAL RESULTS APPLETON YARD - FORMER REFUELING AREA APPLETON, WISCONSIN TABLE 3 Page 2

				MW	.3					NW.4	7			TMW-2	ES	PAL
	Units	11/6/1996	11/26/1996	8661/8/7	3/27/2000	2/18/2002	9/10/2002	11/6/1996	11/26/1996	4/8/1998	3/27/2000	2/18/2002	9/10/2002	2/26/2002	1/8/d	T-an
VOCs																
Benzene	J/g/I	<0.19	×	< 0.5	<0.5	×	<1.0	0.28	×	0.735	<0.5	<1.0	<1.0	<1.0	S	0.5
n-Butylbenzene	μg/L	<0.76	×	×	×	×	×	0.83	×	×	×	×	×	×		
sec-Butyfbenzene	μg/L	<0.35	×	×	×	×	×	0.79	×	×	×	×	×	×	;	;
MTBE	µg/L	<0.73	×	< 1.0	<0.92	×	0.4>	<0.73	×	< 1.0	<0.92	0.4>	<4.0	0. † >	9	13
Ethylbenzene	ηgη.	<0.19	×	< 1.0	<0.6	×	<1.0	0.72	×	< 1.0	<0.6	<1.0	<1.0	1.3	300	0+1
Isopropylbenzene	η/ŝη	<0.23	×	×	×	×	×	0.57	×	×	×	×	×	×	:	;
p-Isopropyltoluene	Hg/L	<0.52	×	×	×	×	×	1.13	×	×	×	×	×	×	:	ï
n-Propylbenzene	µg/L	<0.36	×	×	×	×	×	0.68	×	×	×	×	×	×	:	ì
Toluene	L/g/L	<0.11	×	< 1.0	<0.6	×	<1.0	<0.11	×	< 1.0	<0.6	<1.0	<1.0	<1.0	1000	200
Total Trimethylbenzenes	µg/L	<0.81	×	4 2.0	<2.6	×	<2.0	11.3	×	1.02	2:6	€.0	0.5	7.6	780	96
Total Xylene	µg/L	<0.57	×	< 2.0	<1.7	×	<3.0	1.76	×	< 2.0	1.1>	<3.0	<3.0	<3.0	00001	1000
Naphthalene	ng/L	<0.54	×	×	×	×	×	9.95	×	×	×	×	×	×	2	တ
PAHS																
Acenaphthene	µg/L	×	<1.7	< 0.11	×	×	<0.52	×	1.4	< 0.15	×	×	<0.55	×	;	:
Acenaphthylene	J.S.	×	<1.5	< 0.08	×	×	<1.0	×	< 1.3	< 0.08	×	×	0.8	×	;	;
Anthracene	μg/L	×	< 0.12	< 0.03	×	×	<0.052	×	< 0.11	< 0.03	×	×	0.21	×	;	;
Benzo(A)Anthracene	#g/L	×	< 0.12	< 0.06	×	×	<0.052	×	< 0.11	< 0.06	×	×	0.26	×	i	;
Benzo(A)Pyrene	µg/L	×	< 0.24	< 0.06	×	×	< 0.052	×	< 0.21	< 0.06	×	×	<0.055	×	0.2	0.05
Benzo(B)Fluoranthene	μg/L	×	< 0.14	< 0.03	×	×	<0.10	×	< 0.13	< 0.03	×	×	<0.□	×	0.2	0.05
Benzo(K)Fluoranthene	μg/L	×	< 0.26	< 0.03	×	×	<0.052	×	< 0.23	< 0.03	×	×	<0.055	×	1	;
Benzo(G,H,I)Perylene	µg/L	×	< 0.26	< 0.05	×	×	<0.10	×	< 0.23	< 0.05	×	×	<0.11	×	:	:
Chrysene	J/g#	×	< 0.11	< 0.04	×	×	< 0.052	×	< 0.093	× 0.04	×	×	<0.055	×	0.2	0.02
Dibenzo (A,H) Anthracene	μg/L	×	< 0.30	> 0.06	×	×	<0.30	×	< 0.26	< 0.06	×	×	0.1.0	×	:	:
Fluoranthene	μg/L	×	< 0.26	> 0.04	×	×	<0.10	×	< 0.23	< 0.04	×	×	<0.11	×	400	8
Fluorene	μg/L	×	< 0.065	< 0.04	×	×	<0.10	×	< 0.057	< 0.04	×	×	0.41	×	00+	08
Indeno(1,2,3-CD)Pyrene	μg/L	×	< 0.13	< 0.04	×	×	< 0.052	×	< 0.12	< 0.04	×	×	<0.055	×	;	ı
1-Methylnaphthalene	πg/L	×		> 0.06	×	×	<0.52	×	> 0.96	> 0.06	×	×	<0.55	×	;	1
2-Methylnaphthalene	πg/L	×	- I.1	< 0.07	×	×	<0.52	×	< 0.93	< 0.07	×	×	1.5	×	;	ı
Naphthalene	μg/L	×	<0.85	< 0.05	×	×	<0.52	×	6.2	< 0.05	×	×	<0.55	×	7	00
Phenanthrene	µg/L	×	< 0.13	< 0.08	×	×	<0.052	×	< 0.12	3,48	×	×	< 0.055	×	;	:
Pyrene	μg:(Γ	×	< 0.45	< 0.17	×	×	<0.052	×	< 0.39	< 0.17	×	×	<0.055	×	250	50
Sulfare	MG/L	30:0	×	×	×	266	792	021	×	×	×	15	67.5	×	250	125

ES = NR 140 Enforcement Standard
PAL = NR 140 Preventive Action Limit

55.2 NR 140 Enforcement Standard Exceedance

X = Compound was not analyzed MTBE = Methyl-tert-butyl ether

yearojects/22(46)xif/Appletor groundwater lab data XLS

GROUNDWATER ANALYTICAL RESULTS APPLETON YARD - FORMER REFUELING AREA APPLETON, WISCONSIN TABLE 3 Page 3

<1,0 14 9,8 12 X X X X X X X X X X X X <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0 <1,0	-		12/0/2/002	concisar						
Pag/L C1.0 14 9.8 14 9.8 14 9.8 14 9.8 14 9.8 14 9.8 14 9.8 14 14 14 14 14 14 14 1		nits		TT COLLOS	9/10/2002	12/9/2002	3/11/2003	12/9/2002	μg/L	μg/L
Pagh			1							,
Penzene Pg/L X X X X X X X X X		g/L	<1.0	41	8.6	12	<10.0	×	vo.	0.5
μg/L α4.0 α4.0		g/L	×	×	×	×	×	×	•	
μg/L <4.0 <4.0 <4.0 μg/L <1.0 16.0 <1.0 γlbenzene μg/L × × × γlbenzene μg/L × × × γlbenzene μg/L <1.0 14.0 <1.0 γlbenzenes μg/L <2.0 33.0 <2.0 μg/L <0.043 × × × ρhthene μg/L <0.043 × × ρhthylene μg/L <0.043 × × γβ/L <0.043 × × × (A) Pyrene μg/L <0.043 × × (C,H.I) Perylene μg/L <0.043 × × α (C,H.I) Perylene μg/L <0.043 × ×		B/L	×	×	×	×	×	×	;	1
μg/L <1.0 16.0 <1.0 μg/L X X X γβ/L X X X γβ/L X X X γβ/L <1.0 14.0 <1.0 immethylenzene μg/L <2.0 33.0 <2.0 μg/L <0.043 X X X phthene μg/L <0.043 X X phthylene μg/L <0.043 X X cene μg/L <0.043 X X (A)Anthracene μg/L <0.043 X X (B)Fluoranthene μg/L <0.043 X X (B)Fluoranthene μg/L <0.043 X X (B)Fluoranthene μg/L <0.043 X X (C,H,I)Perylene μg/L <0.043 X X (C,H,I)Perylene μg/L <0.043 X X co (A,H) Anthracene μg/L <		g/L	<4.0	<4.0	<4.0	<4.0	<40.0	×	જ	13
μg/L X <td>=======================================</td> <td>g/L</td> <td>0.1></td> <td>16.0</td> <td><1.0</td> <td><1.0</td> <td><10.0</td> <td>×</td> <td>82</td> <td>0+1</td>	=======================================	g/L	0.1>	16.0	<1.0	<1.0	<10.0	×	82	0+1
μg/L X X X X X X X X X X X X X X X X X X Yybenzene μg/L <10 14.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0		g/L	×	×	×	×	×	×	;	:
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e μg/L <10 14.0 <1.0 rinnettylbeazenes μg/L <2.0 33.0 <2.0 aslene μg/L <3.0 8.0 <3.0 aslene μg/L <0.043 X X phthylene μg/L <0.043 X X cene μg/L <0.043 X X (A)Anthracene μg/L <0.043 X X (A)Pyrene μg/L <0.043 X X μg/L <0.043 X X X κ(I-L)Perylene μg/L <0.043 X X κ(I-L)Pyrylene μg/L <0.043		g/L	×	×	×	×	×	×	:	:
rinnethylbenzenes μg/L <2.0 33.0 <2.0 aslene μg/L <3.0 8.0 <3.0 aslene μg/L <0.043 X X phtheae μg/L <0.043 X X phthylene μg/L <0.043 X X cene μg/L <0.043 X X (A)Anthracene μg/L <0.043 X X (B)Fluoranthene μg/L <0.043 X X (K)Fluoranthene μg/L <0.043 X X (C,H,I)Perylene μg/L <0.043 X X co (A,H) Anthracene μg/L <0.043 X X me μg/L <0.043 X X x(12,3-CD)Pyrene μg/L <0.043 X X μyInaphthalene μg/L <0.043 X X μymaphthalene μg/L <0.043 X X μymaphthalene <t< td=""><td>1</td><td>J/g</td><td><1.0</td><td>14.0</td><td><1.0</td><td><1.0</td><td><10.0</td><td>×</td><td>0001</td><td>200</td></t<>	1	J/g	<1.0	14.0	<1.0	<1.0	<10.0	×	0001	200
μg/L		g/L	<2.0	33.0	<2.0	<2.0	<20.0	×	480	96
phtheae μg/L <0.043 X X phthylene μg/L <0.043 X X phthylene μg/L <0.043 X X cene μg/L <0.043 X X (A)Pyrene μg/L <0.043 X X (A)Pyrene μg/L <0.043 X X (K)Fluoranthene μg/L <0.043 X X (C,H.I)Perylene μg/L <0.043 X X co (A,H.I)Perylene μg/L <0.043 X X me μg/L <0.043 X X nthene μg/L <0.043 X X μg/L <0.043 X X X μg/L <0.043 X X X μg/L <0.043 X X X μηπορητίαθειο μg/L <0.043 X X μηπορητίαθειο μg/L <0.043 X		g/L	<3.0	8.0	<3.0	<3.0	<30.0	×	000'01	0001
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Hg/L C(1) H3 X X Hg/L C(1) H3 X Hg/L H3 H3 H3 Hg/L H3 H3 H3 Hg/L H3 H3 H3 Hg/L H3 H3 H3 Hg/L H3 H3 H3 H3 Hg/L H3 H3 H3 H3 H3 H3 H3			9	;	,		;	·		
μg/L <0.043 X X μg/L <0.043 X X μg/L <0.043 X X μg/L <0.043 X X mthene μg/L <0.043 X X rylene μg/L <0.043 X X Anthracene μg/L <0.043 X X <0.043 X X	-	LEVT	<0.043	×	×	5.	×	×	i	ŧ
μg/L <0.043 X X		18/L	<0.043	×	×	0.13	×	×	;	;
μg/L <0.043	# <u> </u>	rg/L	<0.043	×	×	<0.053	×	×	;	1
нg/L		rg/L	<0.043	×	×	<0.053	×	×	;	t
дв/L <0.043		T/a)	<0.043	×	×	<0.053	×	×	0.2	0.02
μg/L <0.043 X X μg/L <0.043		ig/L	<0.043	×	×	<0.053	×	×	0.2	0.02
μg/L <0.043 X X		7/8)	<0.043	×	×	<0.053	×	×	·	;
1) Anthracene μg/L <0.043 X X X μg/L <0.043 X X X X CD)Pyrene μg/L <0.043 X X X x x μg/L <0.043 X X X x x μg/L <0.043 X X X x x μg/L <0.043 X X X X x x μg/L <0.043 X X X X X x x x μg/L <0.043 X X X X X X X X X X X X X X X X X X X	-	'g/L	<0.043	×	×	<0.053	×	×	:	;
1) Anthracene μg/L <0.043 X X X μg/L <0.043 X X X CD)Pyrene μg/L <0.043 X X X x x μg/L <0.043 X X X x x μg/L <0.043 X X X x μg/L <0.043 X X X x μg/L <0.043 X X X x x μg/L <0.043 X X X X x x μg/L <0.043 X X X X X X x x x x x x x x x x x x x		rg/L	<0.043	×	×	<0.053	×	×	0.2	0.02
μg/L <0.043 X X μg/L <0.043 X X tup/L <0.043 X X up/L <0.043 X X tup/L <0.043 X X up/L <0.043 X X		ig/L	<0.043	×	×	<0.053	×	×	;	;
μg/L <0.043 X X 2.3-CD)Pyrene μg/L <0.043		rg/L	<0.043	×	×	<0.053	×	×	904	8
μg/L <0.043 X X X X μg/L <0.043 X X X X X X X X X X X X X X X X X X X		ug/L	<0.043	×	×	0.92	×	×	904	8
hthalene μg/L <0.043 X X X hthalene μg/L <0.043 X X X μg/L <0.043 X X X X X X X X X X X X X X X X X X X		ıg/L	<0.043	×	×	<0.053	×	×	;	;
hthalene μg/L <0.043 X X X μg/L <0.043 X X X x x x x x x x x x x x x x x x x		1g/L	<0.043	×	×	<0.053	×	×	;	ł
μg/L <0.043 X X X X X X X X X X X X X X X X X X X		1g/L	<0.043	×	×	1.5	×	×	;	:
μg/L <0.043 X X		1g/L	<0.043	×	×	5.9	×	×	4	90
_	<u> </u>	μg/L	<0.043	×	×	<0.053	×	×	;	:
. <0.043 X		rg/L	<0.043	×	×	<0.053	×	×	250	80
										
Suffare MGL 498 X X 8.45		4G/L	498	×	×	8.45	×	হ	250	125

ES = NR 140 Enforcement Standard

PAL = NR 140 Preventive Action Limit

55.2 NR 140 Enforcement Standard Exceedance

MW-6 was installed on 1 1/22/02 to replace abandoned TMW-1.

ysproject/23046/ali/Appleson Yard Refueling Lab Data ats

TABLE 1 page 1 (Prior to 1998) SOIL FIELD OBSERVATIONS AND LABORATORY RESULTS APPLETON YARD - FORMER REFUELING AREA APPLETON, WISCONSIN

		4000	412	1.0										
Boring		(feet)	(units)	Description	W'et	Odor	URU (mg/kg)	Benzene (μg/kg)	Foluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	(12,4-TMB (12,4-TMB	1,3,5-TMB	MTBE (ug/kg)
ē	+	100		1										
96.0.30		25.5	,	Fill: Ballast, Fopsoil, Roots	2	g Z	×	×	×	×	×	×	×	×
(0/2)(0)		0.4.0	.	Kd Br Ni Cl	Moisi	Yes	86	Ş.	2	\$25	\$\$	\$3	\$5	<25
		0.0.0	2 :	¥ :	£	ź	×	×	*	×	×	×	×	~
		0.5-0.0	7,		-	•	×	×	*	×	×	×	×	×
	_	0.00	٥	•	<u>.</u>	Ž	×	×	×	×	×	×	×	×
GP-2	╀	0-70	⊽	Fill Rth C. Co. & Gral	55	Mis		:						
(8/17/96)		0.40	7		9	2 -	× ;	×	×	×	×	×	×	¥
		40-60	7 7	יאופו פוכי	151014		0.72	9	8	\$2	050	\$5	<25	<25
		0.00	7 7			; ;	×	×	×	×	×	×	×	2
		200	7 5			= .	×	×	×	×	×	*	×	~
			7	•	-	•	×	×	×	*	×	×	*	×
	+	1										•		_
775	<u>.</u>	0.50	\$3	Blk Si, Sa, Grvl, Cl	ž	Yes	×	×	×	×	×	×	×	-
(04.17.19)		2.0-4.0	53	Poss Fill: Dk Br Si Cl	ŧ		3540	06>	<42	1250	<282	66>	<104	11.00
		4.0-6.0	8	Rd Br Si Cl	Moist	r	×	×	×	×	*	*		
		0.8-0.9	38		÷	ž	×	×	×	*	: *		< >	
	_	1.0-10.0	20	7			×	×	*		: *		. >	. ,
	4										,	,	<	
3		0-2.0		Fill: Blk Si, Sa, Grvl, Roots	S.	Yes	×	×	×	*	,	,	,	,
(8/14/96)	2-S	2.0-4.0	52	Rd Br Si CI	Moist		1500	06>	<42	÷ \$	357		· 6	
		4.0-6.0	69	1		No	×	×	· *	. *	; ,	î ,		7
		6.0-8.0	13	£				. *		. ,	٠,	۲ ،	× :	
		0.01-0.0	34				, ,	۲ ۽		< >	K 1	Κ :	×	×
				-			,	•	,	Κ.	×	×	×	×
GP-5		0-2.0	59	Fill: Baltast, Sa, Grvl, Topsoil	£	Yes	*	*	,	,	,	,		
(8/14/96)		2.0-4.0	25	BrSiCt	Moist		875	. \$5 \$5	, č	· č	× -	× %	× (× ;
	_	4.0-6.0	2	ŧ			×	*) *	,	· ·	,	7	711>
	, ,	0.8-0.9	51			ž	*	. *	: ×	٠.	< *	< >	ж »	* 1
		10-10.0	7.	•			×	×	*	×	: **	< ×	• >	
. 60	4									-		:	,	
3		0-2.0	⊽	Fill: Ballast, Sa, Grvl, Topsoil	ş	No.	×	×	×	*	*	2	,	,
(8/14/96)	S-1	2.0-4.0	⊽	Rd Br Si CI	Moist		×1.8	425	\$	8	. 050	. 55	, <u>\$</u>	· č
		4.0-6.0	⊽				×	×	×	×	×	×	· ×	
	-	0.0-8.0	⊽ '		:		×	×	×	×	×	*	×	ж
		001-0	⊽	•			×	*	~	×	×	*	×	×
CP-7	-	0-2.0	⊽	Fit Ballast Ca Ci	12/2	2								
(8/17/96)	\$-2	2.0-4.0	. ☆		Moist	·	, ,	× č	× 7	× ;	× (× ;	× (× :
		1.0-6.0		RdBrSiCl			·) ×) *	3	ž,		3 ,	9
		6.0-8.0	7	•			: ×	: ж	· ×		٠,	e s	к ;	×
		0.01-0	⊽		•		· ×	×	: *		• >	٠,	×)	× :
6	4									•	,		۷	*
2000		0.20	8	Fill: Blk Sa, Grvl, Si	S.	No	14200	<450	679	2140	8630	19900	8650	<1120
(96.71.8)		2040	122	BrSiCl	Moist	Yes	×	×	×	¥	×	×	×	
	7,0	0.00	≘ 6	F :		ı	×	×	×	s#	×	×	. *	
	_	0.6.00	ζ,			1	×	×	×	y	×	×	×	*
		0.01-0.8				Š.	<1.8	\$3	₽	25	0\$>	\$	\$	÷ ()
NR 720 Residual Contaminant Levels (ug/kg)	ninant Levels	(ug/g)					1	;	100					
NR 746 Table 1 Soil Screening Leads (cotto)	stare I made	(allow)					2	2	0067	2966	90	1	:	;
NR 746 Table 2 Direct Contact Contact Contact Contact	training grants	(SvSn) e	1					8500	38000	4600	42000	83000	000	:
			7 10 1					1100	-		;	-		

 Notes.
 Br = Brown
 Cl = Clay

 A = Not Aralyzed
 Br = Brown
 Cl = Clay

 DRO = Modified Diesel Range Organics
 Rd = Red
 Gn | = Gravel

 TMB = Trimethylberazene
 Si = Sitty
 Bk = Black

 MTBE = Methyl tert Butyl Ether
 Sa = Sand
 Dk = Dark

Soil sample HA-2 was processed through water leach test and the leachate was analyzed for PVOCs. No PVOCs were detected in the teachate.

y projecti 22046 oblikyp leum Yand Relecting Lab Data sk

Soil sample HA-2 was processed through water leach test and the leachate was analyzed for PVOCs. No PVOC3 were detected in the leachate.

CI = Clay Grvl = Gravel Blk = Black Dk = Dark

Br = Brown Rd = Red Si = Silty Sa = Sand

Notes: X = Not Analyzed DRO = Modified Diesel Range Organies TMB = Trimethylberizene MTBE = Methyl tert Butyl Ether

TABLE I page 2 (Prior to 1998) SOIL FIELD OBSERVATIONS AND LABORATORY RESULTS APPLETON YARD - FORMER REFUELING AREA APPLETON, WISCONSIN

1,00,000 1,00,000	Boring		Depth (feet)	P1D (units)	Soil Description	₩ec	Petroleum Odor	DRO (mg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbeazene (µg/kg)	Total Xylenes (µg/kg)	1,2,4-TMB (µg/kg)	1,3,5-TMB (µg/kg)	MTBE (µg/kg)	
The partial bases and a partial bases are all the partial bases and a partial bases are all the partial bases are all th	6		0.00	,	2	;	,									
Fig. Br. St. Trace Gr. No. No.	٠.٠٠ د	<u>ن</u>	0-2-0	⊽	Fill: Battast, Blk St Sa	2 2	Ž.	×	×	×	×	×	×	×	×	
C	(10,5/96)	S-5	2.0-4.0	⊽	Rd Br Si Cl	Moist	•	×	×	×	×	×	×	×	×	
Column C		S:3	4.0-6.0	⊽	•			<1.9	₽	8	\$	95	8	25	<25	
Fig. Bib. Sig., Circ. 19, No.		4 X	6.0-8.0	⊽	•	z	•	×	×	×	×	×	×	×	×	
The part of the		S-5	8.0-10.0	⊽	•	•		×	×	×	×	×	×	×	×	
Fill Bib Sign Graph			10.0-12.0	⊽	•			×	×	×	×	×	×	×	×	
The Bright Sharedown No		_	12.0-14.0	⊽	•	•	*	*	×	×	×	×	×	×	×	
Fill Bis Sign Chr No		S.	14.0-16.0	⊽	•			×	×	×	×	×	×	×	×	
Fill Bis Sign Cor No																
Fill Dk FS ICH Moist Vis. 110 C S C C C C C C C C	HA-1	S:	0.2.0	⊽	Fill: Blk Si Sz. Grv	ž	Š	×	×	×	×	×	×	×	×	
The branch of	(10.2%)	S-2	2040	⊽	RdBrSiCi			*	×	×	×	×	*	*	×	-
Fill Bib St, Trace Gr. No.		S-3	4.0-6.0	12	•	Moisi	Yes	305	55	<25	<25	<\$0	\$	<25	\$5	
Fig. Defision No Yes 13100 C43 Sy40 4690 C43 C43 C45 C45																
Figure 6.5C Missis No	HA-2	S-I	0-2:0	74	Fill: Blk Sa, Trace Grv	ž	Yes	23100	25	125	1620	3940	4690	<25	1	
Hablesch Meist No	(96/2/01)	S-2	2040	67	Fill: Dk Br Si Cl		•	×	×	×	×	×	×	×	×	
Fill Digit Sist No		S-3	4.0-6.0	-	RdBrSiCI	Moist	S _S	<u></u>	8	<25	\$	050 \$0	\$2	67	\$	
Fill Digitize Fig. 25 Fill																
Fill BR Si Sa Trace Fro Crop Noise Fill BR Si Sa Trace Fro Crop Fill BR Si Sa Trace F	MW-I	S-I	0-2:0	⊽	Fill: Dk Br Si Sa	ĝ	No	×	×	×	×	*	×	×	×	
Fill Dk Br Sign		S-2	2.0-4.0	₹		Moist	,	×	×	×	×	×	×	×	×	
Fill Dk B: St. Trace Graph Graph St. Trace Fire Graph St. Trace Graph St.		S-3	4.0-6.0	⊽	RdBrSiCl			*	*	×	×	*	×	×	×	
Fill Dk Br Si Arace Fire Cry No No No No No No No N		4.	60-80	. ∠							. *	. *	*	*	×	
Fill Dk B Si SL Trace Graph No			80.100	. △						٠.	٠,	. >			. >	
Fill Dk B Si Cl			0.000	7 7	•			٠.	∢ ;	٠:	٠ ،	. ;	٠,	• ,	< >	
Fill Dk Psi Sa			10.0-12.0	, ,		. ,		ĸ	×	×	*	*	۲	4	•	
Fill DR SiS, Trace Five Circ No			12.0-14.0	⊽	•			×	×	×	×	×	×	*	×	
Fill Dis Sign Fig. 12 Fill Dis Sign Fi	1707	-	0	1	63. Oct 0-0.0.	12.	, I	,	,		,	,	,	,	,	
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	NR 746 Table I Soil Sci	ecning Le	vels (ug/kg)						8500	38000	4600	42000	83000	11000	;	
	NO 344 Table 3 Disease		and the second	in Gray)					8							
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SOIL FIELD OBSERVATIONS AND LABORATORY RESULTS APPLETON YARD - FORMER REFUELING AREA APPLETON, WISCONSIN TABLE 1 page 3

Boring		Depth (feet)	PID (units)	F1D (units)	Soil Description	Wet *	Petroleum Odor	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	1,2,4-TMB (µg/kg)	1,3,5-TMB (μg/kg)	MTBE (µg/kg)
SB-10 (4/8/98)	S-1 S-2	0.5.2.5	41	130	Fill: Sand & Grvl Fill: Sand & Grvl	Yes	Yes	< 32 x	<32 x) ×	125 ×	212 x	140 ×	< 32 x
SB-11 (4/8/98)	S-1 S-2	0.5-2.5	236 150	330	Fill: Sand & Grvl Fill: Sand & Grvl	Yes	Yes	<279 x	<279 x	1067 x	1465 x	7428 x	4220 x	< 279 x
SB-12 (4/8/98)	S-1 S-2	0.5-2.5	104	140	Fill: Sand & Grvl Fill: Sand & Grvl	Yes	Yes	< 122 x	<122 x	249 x	202 x	< 122 x	< 122 x	< 122 x
	S-1 S-2	0.5-2.5	7 4	12 10	Fill: Sand & Gryl Fill: Sand & Gryl	Yes	22	< 33	< 33	<333 x	99 ×	<33 x	< 33	< 533 ×
SB-14 (4/8/98)	S-1 S-2	0.5-2.5 2.5-4.5	135	93 75	Fill: Sand & Gryl Fill: Sand & Gryl	Yes	Yes	< 29 x	< 29 x	<29 ×	38 ×	<29 x	<29 x	× ×
B-8A (2000) (12-27-00)		0.0-0.0	4		Fill: Sand & Grv!	o _N	Yes	×	×	×	×	×	×	×
GP-11 (2-27-01)	S-1	0.5-2.5			Fill: Sand & Grvl		⁰ Z	×	×	×	×	×	×	×
GP-12 (2-27-01)	1-S	1.0-3.0	10		Br CI & Grvl		ž	×	×	x	×	×	×	*
GP-13 (2-27-01)	1-S	0.5-2.5	⊽		Sand & Grvl	,	S _o	×	×	×	×	×	×	×
GP-14 (2-27-01)	1-S	0.5-2.5	▽		Fill: Sand & Grvl		S.	×	×	×	ж	×	×	×
GP-15 (2-27-01)	1-S	0.5-0.8	25	,	Fill: Sand & Gryl		Хes	×	×	×	×	×	×	×
GP-16 (2-27-01)	S-1	0.5-2.5	m		Fill: Sand/Grvl & Cl		Š	×	×	×	×	×	×	×
GP-17 (2-27-01)	3	0.5.2.5	4	,	Fill: Sand/Grvl & Cl		ź	×	×	×	×	×	×	×
NR 720 Residual Contaminant Levels (ug/kg)	inant Lev	els (ug/kg)						5.5	1500	2900	4100	1	,	:
NR 746 Table 1 Soil Screening Levels (ug/kg) NR 746 Table 2 Direct Contact Concentrations (10%)	eening Le	vels (ug/kg) ncentrations (u	o/ke)					8500	38000	4600	42000	83000	11000	ŀ
* Soil samples were wet from surface water due to recent precipitation.	rom surfa	ice water due to	o recent precipita	rtion.				100	:		:	-	:	:

Notes:

X = Not Analyzed
DRO = Modified Diesel Range Organics
TMB = Trimethylbenzene
MTBE = Methyl tert Buryl Ether

Soil sample HA-2 was processed through water leach test and the leachate was analyzed for PVOCs. No PVOCs were detected in the leachate. CI ≈ Clay Grvl = Gravel 1 Blk ≈ Black Dk = Dark Br = Brown Rd = Red Si = Silty Sa = Sand

TABLE I page 4 SOIL PAH LABORATORY RESULTS APPLETON YARD - FORMER REFUELING AREA APPLETON, WISCONSIN

Parameter	Units	HA-2A	CP-8A	HA-2A CP-8A B-8A (3000)	SB-10	SB-11	SB-12	SB-13	SB-14	GP-11	CP-12	CP-13	GP-14	GP-15	GP-16	GP-17		Suggested P.	Suggested PAH Clean Up Levels, WDNR 1997	els, WDNR 1997	
		-	ā	<u>-</u>	5-1, 0.5-2.5	S-1, 0.5-2.5"	S.1,0.5.15' S.1,0.5.15' S-1,0.5.1.5'	S-1, 0.5-1.5'	S-1, 0.5-2.5°	S-1, 0.5-1.5°	S-1, 1.0-3.0°	S-1, 0.5-2.5'	S-1, 0.5-2.5°	5-1, 0,5-0,8'	S-1, 0,5-2.5°	8-1,0.5.15	Ground Water				
		(\$77.98) (\$77.98)		(12-27-00)	(4/3/98)	(4/8/98)	(4/8/98)	(86/8/9)	(4/8/98)	(2-27-01)	(3-27-01)	(2-27-01)	(3-27-01)	(2-27-01)	(3-17-01)	(2-27-01)	Pathway	Non-is	Non-industrial	lbrii.	industrial
		ţ	‡															Ingestion	Inhalation	Ingestion	Inhalation
Acenaphthene	(mg/kg)	40.359	40.238	15.2	< 0.0047	25	< 0.0045	< 0.0049	< 0.0043	<0.02	€10:0>	<0.018	0.031	8	0.078	610.0>	38	8	PE .	00000	E
Acenaphthylene	(mg/kg)	<0.335	<0.222	7.94	< 0.0034	< 0.0038	< 0.0033	< 0.0035	< 0.0031	<0.024	<0.022	<0.022	<0.02	<0.023	0.028	<0.023	40.7	<u>89</u>	둳	380	300
Anthracene	(mg/kg)	<0.026	<0.017	4.13	< 0.0013	< 0.0014	< 0.0012	< 0.0013	< 0.0012	<0.02	<0.018	<0.018	0.111	12.9	0.031	610:0>	3,000	2000	Per	300000	Pu
Benzo(A)Anthracene	(mg/kg)	<0.026	40.017	<0.586	< 0.0025	< 0.0028	< 0.0024	< 0.0026	< 0.0023	<0.025	<0.023	<0.023	0.051	0.024	<0.027	<0.024	[1]	0.088	=	3.9	8
Benzo(A)Pyrene	(mg/kg)	<0.053	<0.035	414.0 >	< 0.0025	< 0.0028	< 0.0024	910.0	< 0.0023	<0.019	810.0>	<0.018	0.037	<0.018	<0.020	<0.018	87	0.088 ·	1.6	0.39	23
Benzo(B)Fluorarthene	(mg/kg)	40.03	<0.021	<0.474	< 0.0013	< 0.0014	< 0.0012	0.0280	< 0.0012	<0.019	<0.018	<0.018	0.059	<0.018	<0.020	<0.018	360	0.088	4.6	3.9	33
Benzo(K)Fluoranthene	(mg/kg)	<0.057	<0.038	<0.849	< 0.0013	681070	< 0.0012	0.0094	< 0.0012	<0.035	<0.032	<0.032	0.058	<0.033	<0.037	<0.033	870	88.0	380	33	5300
Benzo(G,H,1)Perylene	(mg/kg)	<0.057	<0.038	<0.948	< 0.0021	< 0.0024	< 0.0021	0.00624	< 0.0020	<0.039	<0.035	<0.035	<0.033	<0.037	<0.041	<0.037	9008'9	1.8	0011	S E	7700
Chrysene	(mg/kg)	<0.023	015	<1.32	> 00016	< 0.0018	< 0.0016	< 0.0017	< 0.0015	<0.023	<0.021	<0.021	0.081	0.040	<0.025	<0.022	37	8.8	270	<u>35</u>	3800
Dibenzo (A,H) Anthracene	(mg'kg)	<0.065	6.043	<1.21	< 0.0025	< 0.0028	< 0.0024	< 0.0026	< 0.0023	<0.049	40.045	<0.045	<0.042	<0.047	<0.052	<0.047	38	9800'0	7.6	0.39	2
Fluoranthene	(mg/kg)	<0.057	40.038	4.65	91000>	< 0.0018	< 0.0016	< 0.0017	< 0.0015	510.0	<0.014	810.0	0.150	6.077	0.016	<0.034	995	000	ng.	10000	Ā
Fluorene	(mg/kg)	85	16.8	26.3	< 0.0016	1.920	0.198	< 0.0017	960:0	<0.025	<0.023	<0.023	0.063	0.025	0.141	0.029	100	009	12	40000	3
Indeno(1,2,3-CD)Pyrere	(mg/kg)	<0.029	0.019	<1.32	0.0193	< 0.0018	>0.016	0.0114	< 0.0015	<0.054	₹0.05	<0.049	<0.045	<0.051	<0.057	<0.051	089	0.088	54	3.9	750
1-Methylnaphthalene	(mg/kg)	-	101	115	1.580	20.2	1.260	16100	6600.0	<0.022	0.021	<0.020	0.585	18.3	0.742	0.023	23	1.00	12	70000	3
2-Methylnaphthalene	(mg/kg)	6.24	156	126	2.600	15.3	0.152	0.0256	< 0.0027	<0.022	<0.02	<0.020	199.0	28.9	0.997	0.035	20	009	2	40000	Z
Naphthalene	(mg/kg)	5.06	47	18.5	0.837	5.18	< 0.021	0.0099	< 0.0020	<0.018	< 0.017	<0.017	0.321	7.54	0.238	0.021	0.4	3	.001	4060	9
Phenanthrene	(mg/kg)	2.87	30.6	67.4	1.07	3.98	0.719	< 0.0035	0.429	0.026	<0.019	0.023	0.463	5.34	0.289	0.119	89	8	99	390	1100
Pyrene	(mg/kg)	(mg/kg) <0.098	<0.065	10.2	< 0.0072	< 0.0079	< 0.0070	< 0.0075	< 0.0066	610.0>	<0.017	0.020	0.188	0.274	0.027	0.021	8,700	500	nd	30000	pa

Notes:

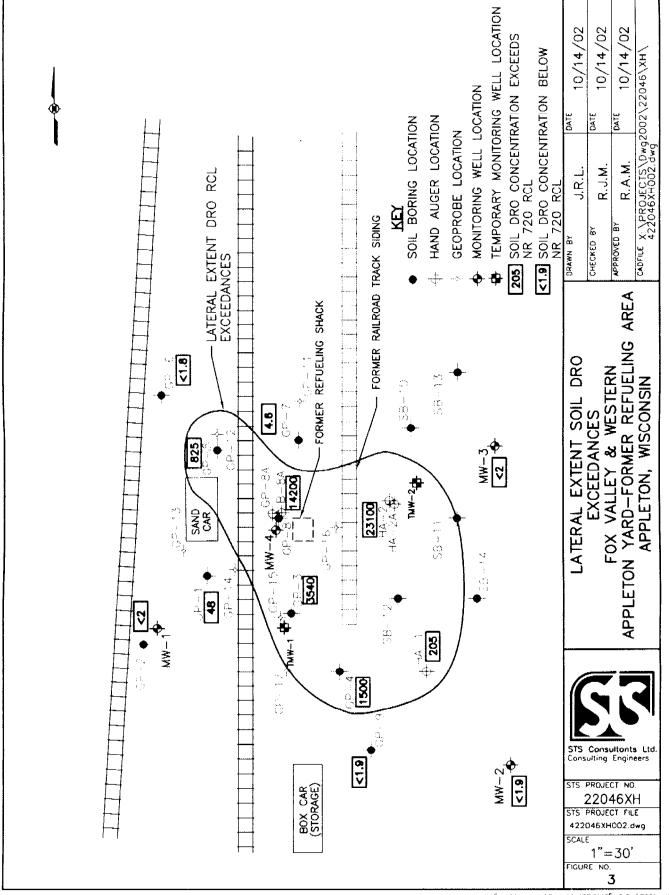
nd = not determined

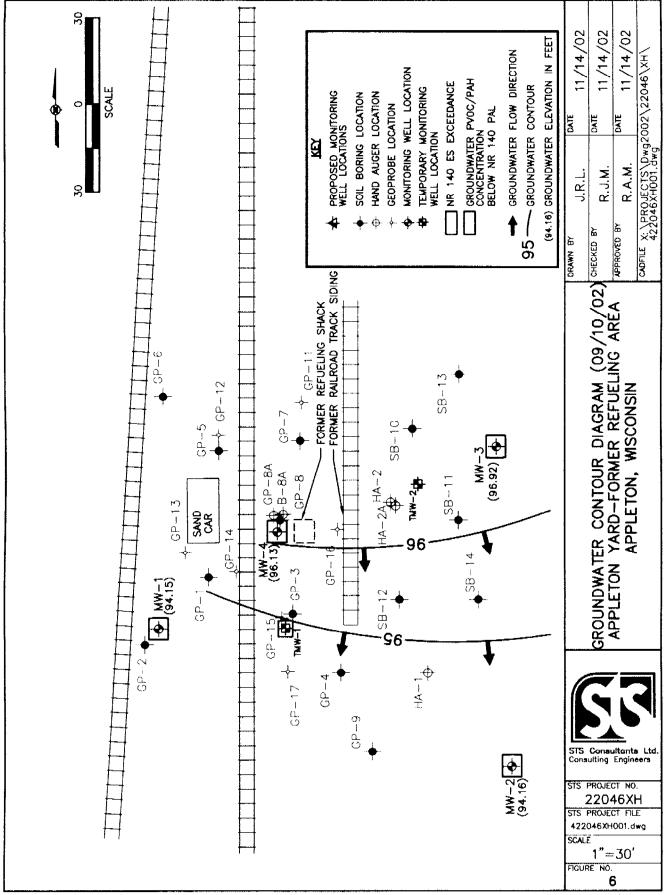
+- * Sample diluted for analysis

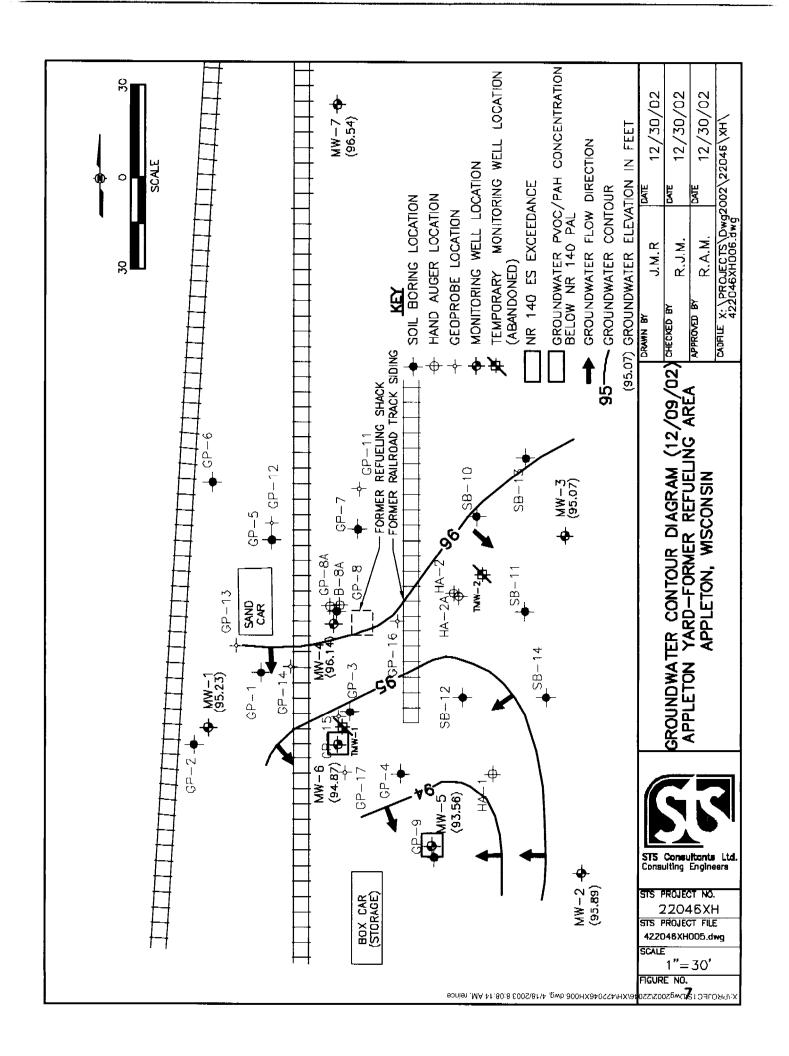
<666 = Result less than practical quantitation limit

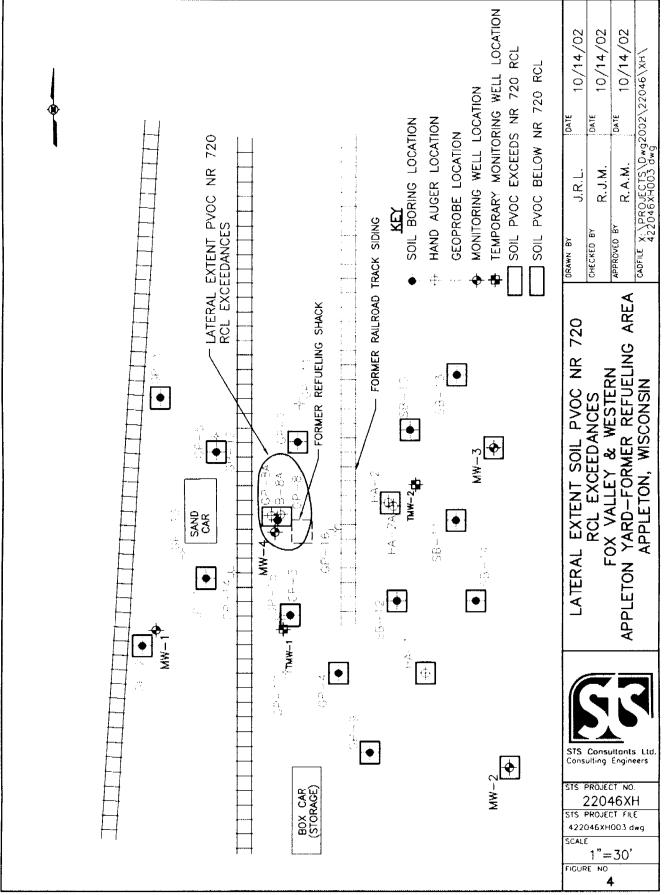
IS Groundwater Pathway RCL Exceedance
• As allowed under NR 720.19 (5) the excess cancer risk for the class B2 carcinogen benzo (a) pyrene was raised from 10° to 10°, yielding a 10-fold increase of the site specific RCL from the suggested RCL.
Also the excess cancer risk for the class D carcinogens naphthaltene and phenartherne were raised from 2 X 10° to 10°, yielding a 5-fold increase of the site specific RCL from the suggested RCL.

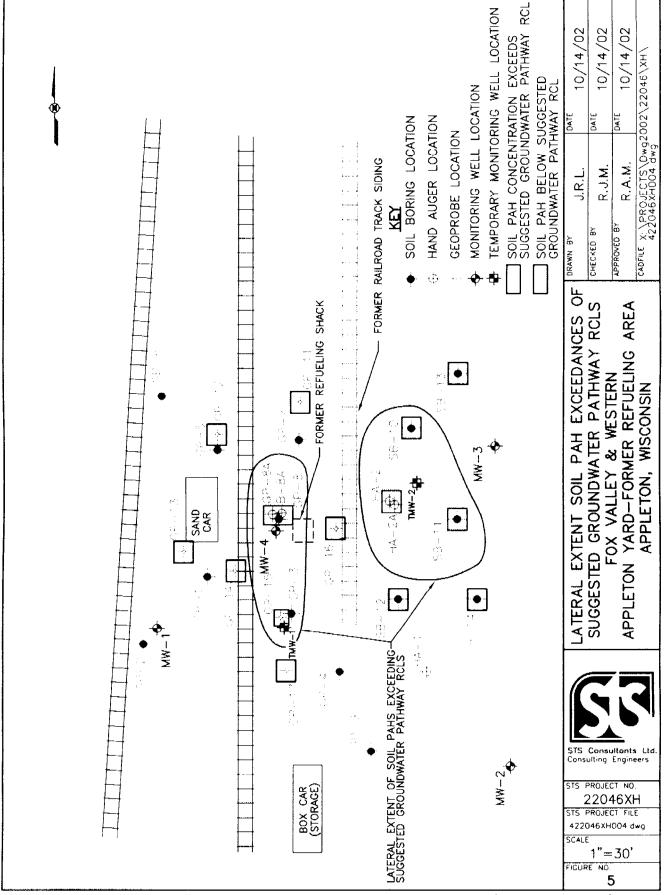
Also the excess cancer risk for the class D carcinogens naphthaltene and phenartherne were raised from 2 X 10° to 10°, yielding a 5-fold increase of the site specific RCL from the suggested RCL.











STATEMENT OF PROPERTY LEGAL DESCRIPTION

As required by s.NR726.05(3) of the Wisconsin Administrative Code, I am providing this signed statement that to the best of my knowledge the legal descriptions that are attached to this statement are complete and accurate for the Canadian National Appleton Yard property located at the intersection of Whitman Avenue and Second Street, Appleton, Wisconsin.

X Suff Mahn Date 5-13-03
(Signature)

GEOFFREY C NOKES
(Name)

MANAGER ENVIRONMENT
(Title)

CANADIAN NATIONAL RAILWAY
(Company)